To: Holland Shepherd
From: Neil A. Simmons

copy for BLM
U67-P91-04

June 5, 1991

M/015/041
7-1-91
WD3 ✓

San Rafael Resource Area
Moab District of the U. S. Bureau of Land Management
900 North 700 East
Price, Utah 84501

SR/PR Rec'd JUN 13 1991

Subject: Supplement to the Plan of Operations for the Gypsum Rock Quarrying Operations on Unpatented Placer Mining Claims BJ # 2, #5, #6 and #10;
UTMC # 212727 ; 212729 ; 226190 ; 226191
Emery County, Utah
SW sec. 29 and SE sec. 30, T. 22 S., R. 9 E.

Enclosed is a description of the activites for quarrying gypsum rock on the San Rafael Resource Area for the next ten years at an estimated rate of 50,000 tons per year. Quarrying is now being done in Area A adjacent to the Moore Road. An outline of the presently disturbed area is indicated on the enclosed copy of an aerial photographic enlargement.

Development is described in four areas adjacent to the Salt Wash Drainage and notations are made on the overlay of the photograph.

Emery County now has a bond covering activities on the Moore Road. This bond may be expanded to include the reclamation and quarrying activities on the placer mining claims in October when it is renewed. Mr. Holland Shepherd of the Utah Oil, Gas, and Mining Division stated that he will accept the bonding arrangements agreed upon by the BLM and Emery County.

If you need any further data before a public hearing on this Plan of Operations please so inform us.

W/ Enclosures

Sincerely,

Lanny L. Jensen

P. O. Box 416
Richfield, Utah 84701

RECEIVED
JUN 17 1991
DIVISION OF
OIL, GAS & MINING

QUARRYING ACTIVITIES:

AREA **A** ( approximately 15 acres ) 

Production The area disturbed by the quarrying operation as of June 1, 1991 is approximately 5 acres. An estimated 25,000 tons of gypsum rock will have been removed from Area A by June 1, 1991. At least an additional 25,000 tons still remains to quarried within the presently disturbed area, which will allow quarrying into late 1991 or early 1992.

After the above 5 acres is depleted of gypsum rock the activity will move westward with a tributary drainage being the limit of the quarry. It may or may not be practical to cross this tributary and quarry the narrow strip of the lower gypsum bed north of the drainage but still south of the Moore Road.

Quarrying will next proceed south and southeast of the presently disturbed area as long as the non eroded thickness of the gypsum rock can be quarried and produce a high quality product.

It is estimated that Area A will have at least a 2 year resource based upon the current 50,000 tons/year rate of production. This resource estimate may vary upon quality control and economic factors. Area A should provide gypsum rock through 1992.

Drainage There are two tributaries of the South Salt Wash drainage in Area A. The catchment basin for both tributaries is small and entirely within the gypsum outcrop of Area A. The present disturbed area has no effect on these tributaries. When the quarrying activities approach these tributaries then "check dams" will be placed at points above the intersections with South Salt Wash. Since these tributaries carry a mimimal load of only gypsum clasts and begin south of and below the Moore Road, quarrying activities may cross the tributaries with no effect on South Salt Wash. It is restated herein from earlier correspondence with the BLM San Rafael Resource Area Management, that the sediment load in the South Salt Wash Drainage has been modified by the influx of fine clastics from the I-70 Materials Site Quarry upstream 2 miles to the East.

When the gypsum rock quarrying activity approaches the South Salt Wash drainage a berm will be left as a barrier.

Reclamation Backfilling of the depleted quarry pits has already been started in the 5 acres presently disturbed. The artifical mound of fines produced by trial screening and crushing activities is being reduced by shipments and backfilling. Complete removal of this one pile will reduce the visual impact and keep the entire operation at or below the original contour. As soon as the quarrying depletes a reasonably sized area ( 3 acres ) backfilling, replacing "top soil", recontouring and reseeding will follow.

Road Acess The present access off of the Moore Road will be sufficient for all proposed activites in Area A.

AREA **B** ( approximately 5 acres )

Production There are approximately 40,000 tons of gypsum rock resource in Area B. An existing access road to the present explosives cache will be suitable for operations in Area B. Area B may be quarried in late 1992 and 1993.

Drainage There is one small tributary in Area B which may be easily blocked with a check dam. The south margin along South Salt Wash may be stabilized by leaving a berm. Neither Area A or B have a significant catchment area to cause any concern even during severe thunderstorms accompanied with sheetflooding. Area B has a slight inclination toward South Salt Wash. Only the large drainage of South Salt Wash periodically has flash flooding.

Reclamation Top soil will be removed and stockpiled. After the completion of the quarrying of gypsum rock, Area B will be backfilled, recontoured and reseeded.

An area in the NW/4 of Claim BJ #5 previously disturbed in the exploration assessment will now be recontoured and reseeded in the Fall of 1991. Only the area of the access road to Area B will utilized in the future as the main road to Areas C and D.

AREA **C** ( approximately 38 acres )

Access The road into Area B will have to be extended across the South Salt Wash Drainage into Area C. This road will cross in the S/2 of claim BJ #5. Because the alluvium in the South Salt Wash Drainage is now covered by a clayey silt from the recent upstream contamination it is planned to trench down to the limestone bedrock and construct a concrete apron across the drainage. An apron across the drainage will solve the problem of truck haulage and periodic flash flooding. Operations will be suspended during a flash flood episode.

Production Area C is underlain by outcrops of the lower gypsum bed which is the same bed quarried in Area A. There is in excess of 250,000 tons of gypsum rock resource in Area C, which will have to be drilled to confirm the reserves before selective quarrying.

Drainage There is one large tributary in the SE coner of Area C, and other short steep gullies around the periphery on the North and South. The large tributary may be blocked by a check dam, the gullies bermed.

Reclamation Top soil will be stripped and stockpiled. After several acres are quarried then backfilling, recontouring and reseeding will progressively follow the quarrying activities.

Timing Area C will probably be opened in 1993, and last at a 50,000 ton/year rate of production for 5 years into 1998.

AREA **D** ( Approximatley 20 acres )

Access A quarry road into Area D will cross from Area C a tributary of the South Wash Drainage. This tribuatry has a limestone bedrock which can have a concrete apron constructed if necessary.

Production A 150,000 ton resource is estimated in Area D.

Drainage The flash flood potential in this tributary is minimal because the flow volume is never high. During high water flow in the tributary operations will be suspended.

Reclamation Reclamation will be similar to the pervious areas quarried.

**Economic Prediction:** At the present 50,000 tons/year production of gypsum rock the resource in Areas A, B, C, and D, will last either a minimum of 10 years or a maximum of 15 years. Because 1990-91 is in a depressed construction business cycle, it is not possible to predict the future demand for gypsum rock from the San Rafael Resource Area.

Processed gypsum rock materials may increasingly compete with wood in construction. Gypsum rock is non toxic and may be quarried with a minimum of environmental impact.

**Haulage of the Moore Road:** The Emery County Moore Road is used for approximately 2 miles to the I-70 interchange. This road is built for the entire distance on structurally competent limestone bedrock.
The road material is from the same limestone. Approximately 2,000 trips per year are necessary to move 50,000 tons of gypsum rock. This averages 10 trips per day for 200 days. Haulage cannot damage the underlying road base because it is bedrock.

The Moore Road now has regulatory signs warning the local traffic of trucks. Barriers have been constructed at appropriate places parallel with the road. The road has been graded periodicaly and any deterioration will be corrected as needed.

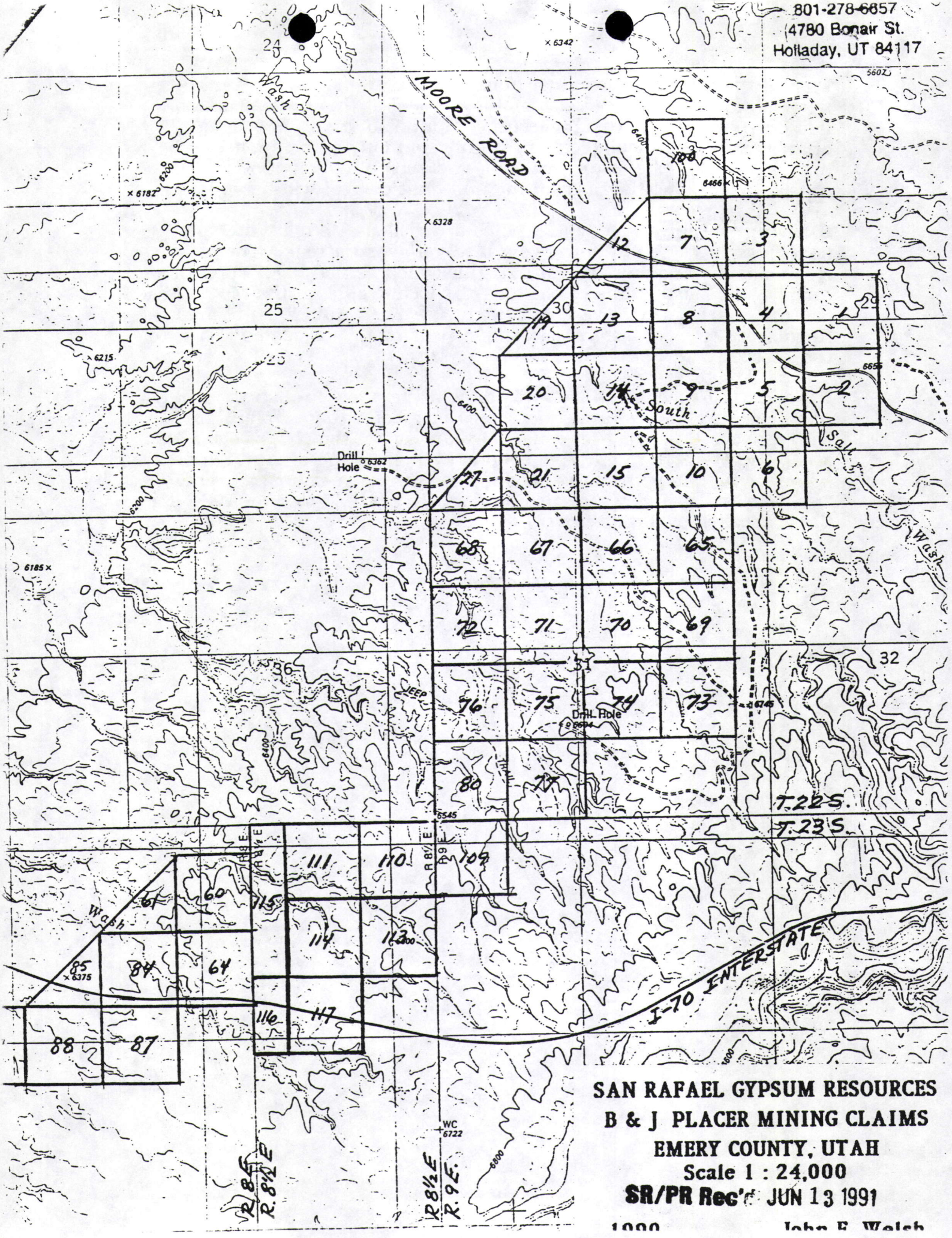
**Air Pollution:** There is presently no crushing or screening at the quarry site. The juniper and pinyon adjacent to the Moore road and

East of the quarry receive dust from the local traffic as well as the truck traffic. The road dust is not a problem at this time. The road has been treated with a magnesium chloride solution once since quarrying began. Reapplications of this solution will be applied as necessary. If in the future crushing and screening activities are added at the quarry site, then permitting and dust control will be addressed.

**Blasting:** Approximately 120 holes are drilled at single intervals once every six week to pulverize a block of gypsum rock. The blast ejects some stone and dust into the air which settled back upon the quarry site. At the time of blasting, the local traffic on the Moore Road is stopped. The explosives are stored in secure vaults West of Area B. Regulatory signs of blasting and explosive storage are posted just off of the Moore Road.

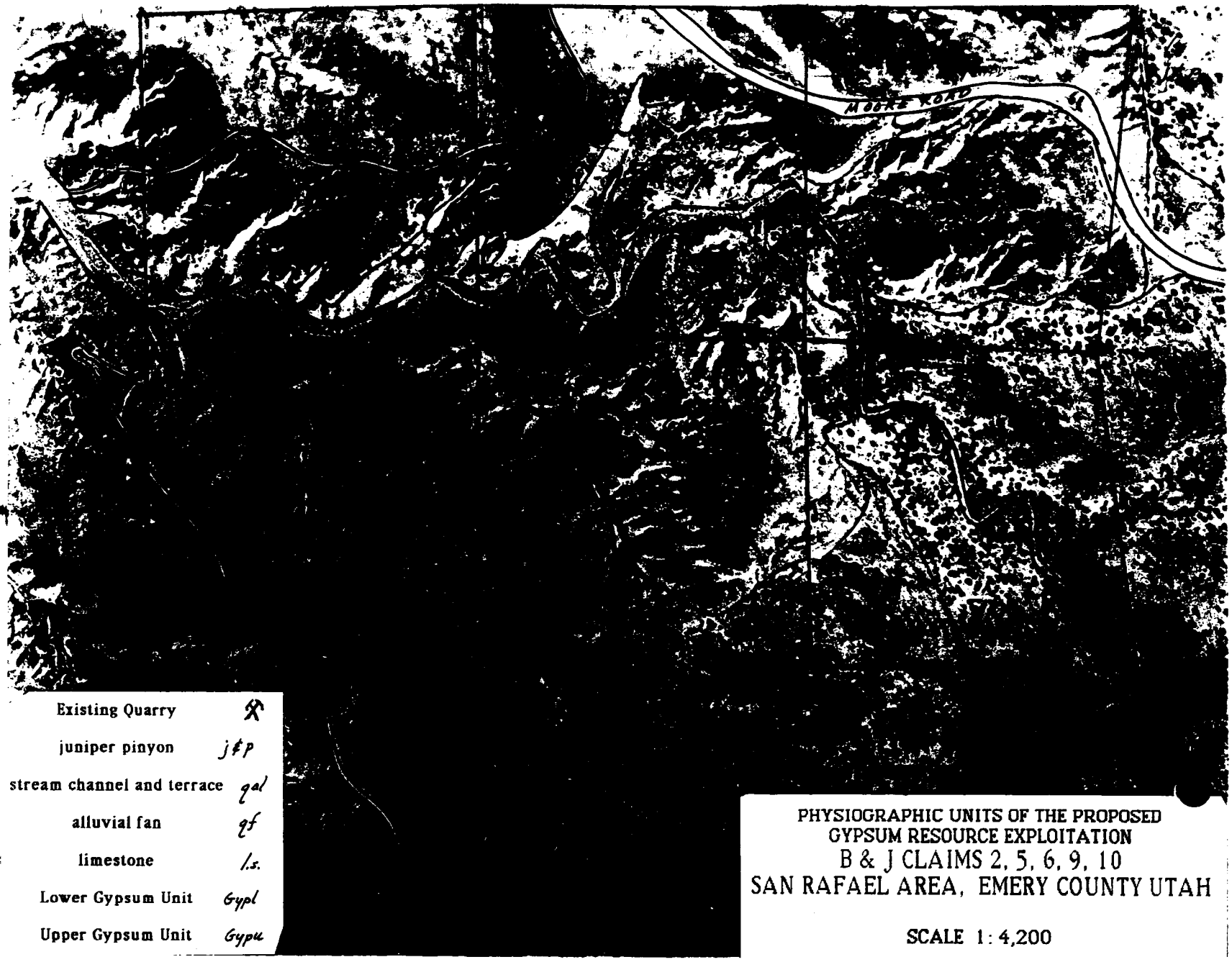
**Reseeding:** Reseeding which was done 5 years ago in disturbed areas has been very sucessful with forage cover greater than 1 plant per square foot. Reseeding took place 3 years ago in the N/2 of claim BJ #9, with two more recent applications over the same area. This area has new plants approaching the success of the 5 year area. Several small areas have been reseeded as recently as the Winter of 1990-91, these areas show little recovery as yet.

801-278-6857
4780 Bonair St.
Holladay, UT 84117




**SAN RAFAEL GYPSUM RESOURCES**
**B & J PLACER MINING CLAIMS**
**EMERY COUNTY, UTAH**
**Scale 1 : 24,000**
**SR/PR Rec'd JUN 13 1991**

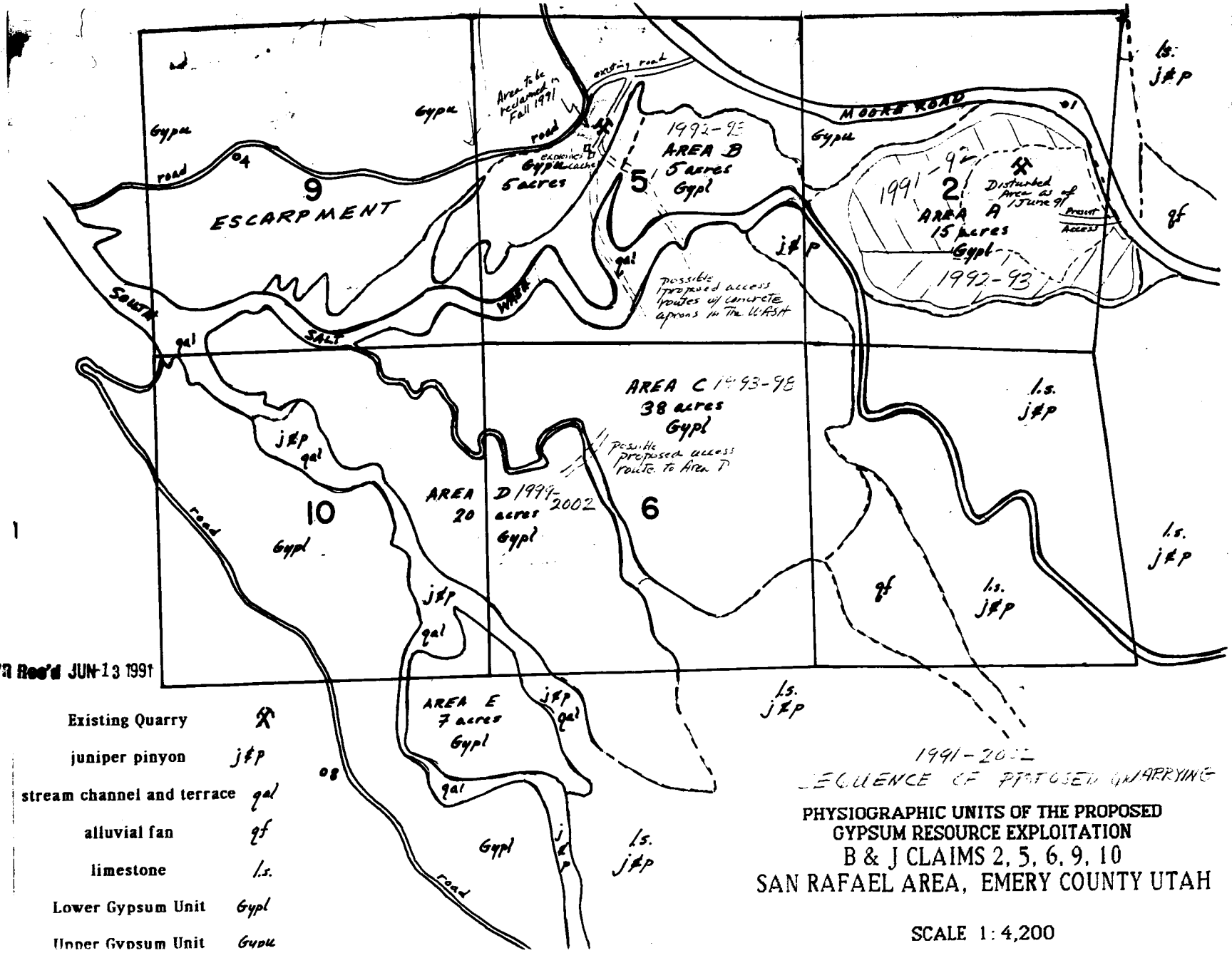
1990 John E. Welch




| | |
|---|---|
| Existing Quarry | ⚒ |
| juniper pinyon | *j ∉ p* |
| stream channel and terrace | *qal* |
| alluvial fan | *qf* |
| limestone | */s.* |
| Lower Gypsum Unit | *Gypl* |
| Upper Gypsum Unit | *Gypu* |

PHYSIOGRAPHIC UNITS OF THE PROPOSED
GYPSUM RESOURCE EXPLOITATION
B & J CLAIMS 2, 5, 6, 9, 10
SAN RAFAEL AREA, EMERY COUNTY UTAH

SCALE 1 : 4,200




SR/PR Rec'd JUN 13 1991

**PHYSIOGRAPHIC UNITS OF THE PROPOSED GYPSUM RESOURCE EXPLOITATION**

B & J CLAIMS 2, 5, 6, 9, 10

SAN RAFAEL AREA, EMERY COUNTY UTAH

SCALE 1:4,200